

REMARKS

Claim 1-14 are pending. As a preliminary matter, Applicants have canceled claims 1-14 and added new claims 15-29. Support for the new claims can be found in the original claims and throughout the Specification. In particular, support is found in paragraphs 0016, 0017, 0027, 0072, and Example 2 of the application as published (U.S. 2006/0014206).

The Examiner has advanced a species election based on the various cell lines listed in claim 6. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1 Applicants respectfully request reconsideration of the species election in view of the following remarks.

The cell lines listed in claim 6 are linked in that they are all examples of eukaryotic cell lines that are suitable for transfection with vectors that direct the expression of voltage-gated ion channels (see paragraph 0074 of the published application). The invention as claimed herein is directed to an assay that utilizes eukaryotic cells that co-express a voltage-gated calcium channel and an inward rectifying potassium channel. In a preferred embodiment the invention includes the use of an HEK293 cell line that co-expresses an L-type voltage gated calcium channel complex (alpha 1C) and the Kir 2.3 inward rectifying potassium channel (C₁₋₆-37-3 cells) (paragraphs 0071 and 0072 of the published application).

The species selection of one eukaryotic cell line over another will not necessarily advance the determination of patentability of an invention that requires the co-expression and function of two other elements, i.e. a voltage-gated calcium ion channel and a specific type of potassium ion channel. These co-expressed elements can equally utilize any of the listed cell lines of claim 6. It is respectfully submitted that a search of the relevant art for assays that utilize these two elements could include any of the listed cell lines and, thus, no serious burden would be incurred by the Examiner in searching and examining claims relating to any species.

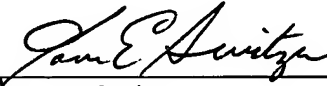
To better define and distinguish the invention, Applicants have submitted new claims which render this species election moot. Notwithstanding, in an earnest effort to be responsive to the Office Action, Applicants elect HEK293 as the species of cells with traverse. This species specifically reads on new claims 15, 18, 21, 27 and 29.

It is believed that the claims are in a condition for allowance and a notice to that effect is earnestly solicited. If the Examiner believes that a telephone conference would be of value, he is requested to call the undersigned counsel at the number listed below.

Serial No.: 10/530,830
Case No.: 21113P
Page 7

Any additional fees required in connection with this submission may be taken from Merck Deposit Account No. 13-2755.

Respectfully submitted,

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Date: 7/24/07

<div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 2px solid black; border-radius: 50%; padding: 10px; margin-right: 10px; text-align: center;"> OFFICE JUL 26 2007 PATENT & TRADEMARK OFFICE </div> <div> MISC. FEE TRANSMITTAL <i>Patent fees are subject to annual revision.</i> </div> </div>		<i>Complete if Known</i>		
		Application Number	10/530,830	
		Filing Date	April 9, 2005	
		First Named Inventor	Xia, et al.	
		Examiner Name	Fernandez	
		Group Art Unit	1651	
TOTAL AMOUNT OF PAYMENT		\$180	Attorney Docket Number	21113P

METHOD OF PAYMENT	
<input checked="" type="checkbox"/> Deposit Account Deposit Account Number 13-2755 Deposit Account Name Merck & Co., Inc.	
The Director is authorized to: <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input checked="" type="checkbox"/> Charge fee(s) indicated below <input checked="" type="checkbox"/> Credit any overpayments </div> <div style="margin-top: 10px;"> <input checked="" type="checkbox"/> Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 </div>	

FEE CALCULATION				
FEES Large Entity				
Fee Code	Fee (\$)	Fee Description	Fee Paid	
1051	130	Surcharge - late filing fee or oath	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	
1051	130	Non-English Specification	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	
1812	2,520	For filing a request for <i>ex parte</i> reexamination	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	
1402	500	Filing a brief in support of an appeal	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	
1452	500	Petition to revive - unavoidable	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	
1453	1,500	Petition to revive - unintentional	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	
1807	50	Processing fee under 37 CFR 1.17(q)	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	
1806	180	Submission of Information Disclosure Statement	<div style="border: 1px solid black; height: 20px; width: 100%; text-align: center;">180</div>	
1809	790	Filing a submission after final rejection (37 CFR 1.129(a))	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	
1810	790	For each additional invention to be examined (37 CFR 1.129(b))	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	
1840	130	Statutory Terminal Disclaimer under 37 CFR 1.321	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	
Other fee (specify) _____ _____ _____ _____			<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	
I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on the date appearing below.				
By <u>Merck & Co., Inc.</u> Date <u>7/24/2007</u>			TOTAL \$180	

SUBMITTED BY			Complete (if applicable)	
Typed or Printed Name	Joan E. Switzer		Reg. Number	34,740
Signature		Date	07/24/2007	
			Deposit Account User ID	